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Search History

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Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT; PLUR=YES; OP=AND			
L13	l5 and L12	19	L13
L12	hiv near3 packag$ adj (signal or sequence)	76	L12
L11	l7 and L10	60	L11
L10	hiv near2 vector	894	L10
L9	l7 and L8	81	L9
L8	hiv near3 (vector or virus)	15931	L8
L7	l5 and L6	81	L7
L6	hiv near4 packag$	342	L6
L5	l3 and L4	255	L5
L4	hiv near3 rev	1238	L4
L3	l1 or L2	6828	L3
L2	splice adj site	6075	L2
L1	splice adj donor and splice adj acceptor	1308	L1

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Search Results - Record(s) 1 through 19 of 19 returned.

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☐ 2. 20030147907. 29 May 01. 07 Aug 03. Retroviral vectors. Kingsman, Alan John, et al. 424/187.1; 424/93.2 435/320.1 435/456 A61K048/00 A61K039/21 C12N015/867.

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☐ 4. 20040009603. 27 Jan 03. 15 Jan 04. Antiviral vectors. Kingsman, Alan John, et al. 435/456; 424/93.2 435/235.1 435/320.1 A61K048/00 C12N015/867 C12N007/00.

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FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:21:18 ON 06 JUL 2004

L1 21148 S SPLICE(W)DONOR AND SPLICE(W)ACCEPTOR OR SPLICE(W)SITE
L2 3070 S HIV(3A)REV
L3 87 S L1 AND L2
L4 652 S HIV(4A)PACKAG?
L5 2 S L3 AND L4
L6 2 DUP REM L5 (0 DUPLICATES REMOVED)

=> d au ti so pi ab 1-2 l6

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
AU Mautino, M. R.; Keiser, N.; Morgan, R. A.
TI Improved titers of HIV-based lentiviral vectors using the SRV-1 constitutive transport element
SO Gene Therapy (2000), 7(16), 1421-1424
CODEN: GETHEC; ISSN: 0969-7128
AB The development of lentiviral vectors that use Rev-independent mechanisms of nuclear export for their genomic RNA could facilitate the construction of novel anti-HIV vectors. The authors have improved the titers of Rev-independent lentiviral vectors having the SRV-1 CTE by mutating the major splice donor and acceptor sites present in the vector and by re-localization of the CTE sequences adjacent to the HIV-1 3'LTR. These two modifications have additive beneficial effects on vector titers and packaging efficiency. Packaging these CTE+ vectors expressing marker genes with a **Rev**-dependent **HIV**-1 helper vector yields higher titers than are obtained using a Rev-dependent lentiviral vector.

L6 ANSWER 2 OF 2 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AU HelgaMaria C; Hammarskjold M L; Rekosh D (Reprint)
TI An intact TAR element and cytoplasmic localization are necessary for efficient packaging of human immunodeficiency virus type 1 genomic RNA
SO JOURNAL OF VIROLOGY, (MAY 1999) Vol. 73, No. 5, pp. 4127-4135.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0022-538X.
AB Although most reports defining the human immunodeficiency virus type 1 (**HIV**-1) genomic RNA **packaging** signal have focused on the region downstream of the major 5' **splice site**, others have suggested that sequences upstream of the **splice site** may also play an important role, In this study we have directly examined the role played by the HIV-1 TAR region in RNA packaging. For these experiments we used a proviral expression system that is largely independent of Tat for transcriptional activation. This allowed us to create constructs that efficiently expressed RNAs carrying mutations in TAR and to determine the ability of these RNAs to be packaged, Our results indicate that loss of sequences in TAR significantly reduce the ability of a viral RNA to be packaged. The requirement for TAR sequences in RNA packaging was further examined by using a series of missense mutations positioned throughout the entire TAR structure. TAR mutations previously shown to influence Tat transactivation, such as G31U in the upper loop region or UCU to AAG in the bulge (nucleotides [nt] 22 to 24), failed to have any effect on RNA packaging. Mutations which disrupted the portion of the TAR stem immediately below the bulge also had little effect. In contrast, dramatic effects on RNA packaging were observed with constructs containing mutations in the lower portion of the TAR stem, Point mutations which altered nt 5 to 9, 10 to 15, 44 to 49, or 50 to 54 all reduced RNA packaging 11- to 25-fold. However, compensatory double mutations which restored the stem structure were able to restore

packaging. These results indicate that an intact lower stem structure, rather than a specific sequence, is required for RNA packaging. Our results also showed that RNA molecules retained within the nucleus cannot be packaged, unless they are transported to the cytoplasm by either Rev/Rev response element or the Mason-Pfizer monkey virus constitutive transport element.

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FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:21:18 ON 06 JUL 2004

L1 21148 S SPLICE(W)DONOR AND SPLICE(W)ACCEPTOR OR SPLICE(W)SITE
L2 3070 S HIV(3A)REV
L3 87 S L1 AND L2
L4 652 S HIV(4A)PACKAG?
L5 2 S L3 AND L4
L6 2 DUP REM L5 (0 DUPLICATES REMOVED)
L7 50 DUP REM L3 (37 DUPLICATES REMOVED)
L8 13 S L7 AND VECTOR

=> d au ti so ab 1-13 l8

L8 ANSWER 1 OF 13 MEDLINE on STN
AU Hammarskjold M L; Li H; Rekosh D; Prasad S
TI Human immunodeficiency virus env expression becomes Rev-independent if the env region is not defined as an intron.
SO Journal of virology, (1994 Feb) 68 (2) 951-8.
Journal code: 0113724. ISSN: 0022-538X.
AB The human immunodeficiency virus (**HIV**) **Rev** protein functions to facilitate export of intron-containing HIV mRNA from the nucleus to the cytoplasm. We have previously shown that **splice site** recognition plays an important role in **Rev** regulation of **HIV** env expression. Here we have further analyzed the effects of **splice sites** on **HIV** env expression and **Rev** regulation, using a simian virus 40 late replacement **vector** system. env expression from the **vector** became completely Rev-independent when an excisable intron was positioned upstream of the env region, provided that env was not recognized as an intron. Complete Rev regulation was restored either by the insertion of a 5' **splice site** between the intron and the env open reading frame or by deletion of the 3' **splice site** of the upstream intron. These results show that 5' **splice sites** can function as cis-acting repressor sequence (CRS) elements to retain RNA in the nucleus in the absence of Rev. They also indicate that **Rev** regulation of **HIV** env expression is critically dependent on whether the env region is defined as an intron. This strengthens the hypothesis that Rev interacts with components of the splicing machinery to release splicing factors and enable export of the mRNA before splicing occurs.

L8 ANSWER 2 OF 13 MEDLINE on STN
AU Lu X B; Heimer J; Rekosh D; Hammarskjold M L
TI U1 small nuclear RNA plays a direct role in the formation of a rev-regulated human immunodeficiency virus env mRNA that remains unspliced.
SO Proceedings of the National Academy of Sciences of the United States of America, (1990 Oct) 87 (19) 7598-602.
Journal code: 7505876. ISSN: 0027-8424.
AB **rev**-regulated expression of **HIV**-1 envelope proteins from a simian virus 40 late replacement **vector** was found to be dependent on the presence of a 5' **splice site** in the env mRNA in spite of the fact that this mRNA remains unspliced. When the 5' **splice site** upstream of the env open reading frame was deleted or mutated, expression of envelope protein was lost. RNA analysis of cells transfected with 5' **splice-site** mutants showed a dramatic reduction in the steady-state levels of env mRNA whether or not rev was present. Envelope expression could be restored in one of the 5' **splice-site** mutants by cotransfection with a plasmid expressing a suppressor U1 small nuclear RNA containing a

compensatory mutation. These experiments show that U1 small nuclear RNA plays a direct and essential role in the formation of an unspliced RNA that is subject to regulation by rev.

L8 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
IN Humeau, Laurent; Li, Yuexia; Merling, Randall; Dropulic, Boro; Schonely, Kathy L.
TI Improved conditionally replicating lentivirus **vectors** inhibiting wild-type virus replication and their therapeutic uses
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
AB The present invention provides improved conditionally replicating **vectors** that have improved safety against the generation of replication competent **vectors** or virus. The **vector** is dependent upon an external agent to replicate in a target cell, such as a cell infected by the wild-type virus. The agent may be a gene deleted in the **vector** but not from the wild-type virus, making it dependent upon infection for replication. The **vector** carries a gene for an agent that gives the **vector** a selective advantage over the wild-type virus in the target cells, such as a ribozyme specific to the wild type virus. As the wild-type virus is eliminated, the **vector** stops replicating and is therefore at a lower risk of recombining with wild-type virus. Also disclosed are methods of making, propagating and selectively packaging, modifying and using **vectors**. Included are improved helper constructs, host cells, for use with the improved **vectors** as well as pharmaceutical compns. and host cells comprising the **vectors**, the use of **vector** containing host cells to screen drugs, and methods of using the **vectors** to determine gene function. The methods also include the prophylactic and therapeutic treatment of disease, especially viral infection, and HIV infection in particular. The development of a **vector** based on HIV-1 carrying a ribozyme against the U5 element is demonstrated. The **vector** is made resistant to the ribozyme by changes in the sequence of its U5 element.

L8 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
IN Hobom, Gerd; Menke, Anette
TI Influenza viruses with enhanced transcription and replication capacities comprising RNA polymerase similar to that of fowl plague virus and uses for gene therapy and vaccination
SO Eur. Pat. Appl., 137 pp.
CODEN: EPXXDW
AB The present invention provides human influenza viruses comprising an RNA sequence encoding a modified RNA-polymerase (RNAP). It was found that specific modifications of the RNA sequence encoding the RNAP, in particular the RNAP PB1 subunit - so as to code for a polypeptide having a higher similarity with fowl plague virus strain Bratislava (FPV) RNAP - provides viruses capable of recognition of viral RNA (vRNA) promoter sequence variations (the so called promoter-up variants) leading to an increase in transcription and/or replication initiation rates. The vRNA promoter may comprise the modifications G3A and C8U, or G3C and C8G, preferably G3A, U5C and C8U, or G3C, U5C and C8G in the 3'-terminal region (5'-CCUGUUUCUACU-3' or 5'-CCUGUUUUUACU-3'); and the modifications U3A and A8U in the 5'-terminal region (5'-AGAAGAAUCAAGG-3'). The present invention also provides a process for the preparation thereof, pharmaceutical compns. comprising said human influenza viruses and their use for gene transfer into mammalian cells, for ex vivo gene transfer into antigen-presenting cells, such as dendritic cells, for in vivo somatic gene therapy, or in vivo vaccination purposes. The invention also relates to other non-avian influenza viruses, including equine, porcine influenza viruses.

L8 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
IN Chang, Yung-Nien; Lu, Xiaobin; Slepushkin, Vladimir; Conde, Betty; Davis,

Brian; Yu, Qiao; Yang, Yanping; Merling, Randal; Han, Wei; Ni, Yajin; Li, Yuexia; Dropulic, Boro

TI Non-infective viral **vectors** for therapeutic use that can block replication of of wild-type virus

SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2

AB Viral **vectors** for therapeutic use that lack genes essential for replication in a target cell and that can inhibit the replication of a wild-type virus that may arise by recombination are described. The **vectors** carry a gene for a ribozyme or antisense nucleic acid that will act on a sequence found only in the replication-competent virus and block its replication. Also disclosed are methods of making, propagating and selectively packaging, modifying, and using such **vectors**. Included are improved helper constructs, host cells, for use with the improved **vectors** as well as pharmaceutical compns. and host cells comprising the **vectors**, the use of **vector** containing host cells to screen drugs, and methods of using the **vectors** to determine gene function. The methods also include the prophylactic and therapeutic treatment of disease, especially viral infection, and HIV infection in particular. The construction of an HIV-1-based **vector** that included a gene for a hammerhead ribozyme directed against the U5 region of wild-type HIV-1 is described. The U5 region of the **vector** was modified to resist ribozyme cleavage.

L8 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

AU Mautino, M. R.; Keiser, N.; Morgan, R. A.

TI Improved titers of HIV-based lentiviral **vectors** using the SRV-1 constitutive transport element

SO Gene Therapy (2000), 7(16), 1421-1424
CODEN: GETHEC; ISSN: 0969-7128

AB The development of lentiviral **vectors** that use Rev-independent mechanisms of nuclear export for their genomic RNA could facilitate the construction of novel anti-HIV **vectors**. The authors have improved the titers of Rev-independent lentiviral **vectors** having the SRV-1 CTE by mutating the major splice donor and acceptor sites present in the **vector** and by re-localization of the CTE sequences adjacent to the HIV-1 3'LTR. These two modifications have additive beneficial effects on **vector** titers and packaging efficiency. Packaging these CTE+ **vectors** expressing marker genes with a **Rev**-dependent **HIV**-1 helper **vector** yields higher titers than are obtained using a Rev-dependent lentiviral **vector**.

L8 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

IN Raybak, Susanna M.; Cara, Andrea; Gusella, Gabriele Luca; Newton, Dianne L.

TI Construction of retroviral **vectors** for delivering viral and oncogenic inhibitors

SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2

AB Cell transformation **vectors** for inhibiting HIV and tumor growth are provided. Optionally, the **vectors** encode RNAses A superfamily members such as eosinophil-derived neurotoxin (EDN) and onconase. Cells transduced by the **vectors** and methods of transforming cells (in vitro and in vivo) using the **vectors** are also provided. The viral and oncogene inhibitors are typically linked to a promoter such as retroviral HIV LTR promoters, the CMV promoter, the probasin promoter, and tetracycline-responsive promoters. The method is exemplified by construction of a viral **vector** containing a **HIV Rev**-responsive element, an encephalomycocarditis virus internal ribosome entry site, a first viral inhibitor subsequence (for immunodominant proteins such as as Tat, Gag, or Rev), **splice donor** site subsequence, **splice acceptor** site subsequence, the above mentioned promoter, and the EDN coding sequence.

The **vector** may be packaged in a liposome and its contents transduced into CD34+ hematopoietic stem cells, CD4+ cells, and transferrin receptor+ cells. Claimed **vectors** include pBAR, pBAR-ONC, and pBAR-EDN.

L8 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AU Schneider, Ralf; Campbell, Mel; Nasioulas, Georgios; Felber, Barbara K.; Pavlakis, George N.
TI Inactivation of the human immunodeficiency virus type 1 inhibitory elements allows Rev-independent expression of Gag and Gag/protease and particle formation
SO Journal of Virology (1997), 71(7), 4892-4903
CODEN: JOVIAM; ISSN: 0022-538X
AB The expression of gag, pol, and env of human immunodeficiency virus type 1 (HIV-1) depends on the presence of the viral Rev protein. This dependence is, at least in part, due to the presence of neg. acting sequences (inhibitory or instability elements [INS]) located within unspliced and partially spliced mRNAs. The pos. interaction of Rev with the Rev-responsive element in these mRNAs counteracts the neg. effects of the inhibitory sequences. Here, we demonstrate that in addition to the previously identified INS1 within p17gag, several other INS elements exist within the gag/pol region of HIV-1. These elements act independently of each other and were eliminated by mutagenesis after the introduction of multiple point mutations not affecting the coding region, leading to constitutive high levels of Gag expression. Expression **vectors** containing an intact or nearly intact p55gag region allowed the production of immature viral particles in mammalian cells in the absence of any other HIV proteins. The introduction of addnl. mutations in the protease region allowed efficient production of Gag/protease, which resulted in processing of the Pr55gag precursor and production of mature Gag particles with a lentivirus-like conical-core structure. The elimination of a newly identified INS element within pol and the previously identified CRS located within int was accomplished by the same methodol. Sequence comparisons of the identified inhibitory elements revealed no apparent homologies and demonstrated that these sequences are not **splice sites**. These results demonstrate that the elimination of INS elements leads to efficient expression of HIV-1 mRNAs in the absence of Rev or any posttranscriptional activating mechanisms.

L8 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
AU Michienzi, Alessandro; Prislei, Silvia; Bozzoni, Irene
TI U1 small nuclear RNA chimeric ribozymes with substrate specificity for the Rev pre-mRNA of human immunodeficiency virus
SO Proceedings of the National Academy of Sciences of the United States of America (1996), 93(14), 7219-7224
CODEN: PNASA6; ISSN: 0027-8424
AB The in vivo effectiveness of ribozymes strongly depends on the correct choice of the **vector** mol. High levels of expression, stability, active conformation, and correct cellular localization are the most important features for a ribozyme **vector**. We have exploited the utilization of the U1 small nuclear RNA (snRNA) as a **vector** for specifically targeting a ribozyme into the nucleus. The Rev pre-mRNA of human immunodeficiency virus type 1 was chosen as target for testing the activity of the U1-ribozyme. The catalytic core of the hammerhead motif, plus the recognition sequences, substituted the stem-loop III of the U1 snRNA. The resulting construct displays efficient cleavage activity in vitro. In addition, in the in vivo system of Xenopus laevis oocytes, the U1-chimeric ribozyme accumulates in large amts. in the nucleus and produces a considerable reduction of Rev pre-mRNA levels. The Rev-specific ribozyme was also inserted in a derivative of the U1 snRNA mutated in the region of pairing with the 5' **splice site**, such as to match it with the suboptimal splice junction of the Rev precursor. This construct shows more efficient reduction of Rev pre-mRNA in vivo than the wild-type U1 **vector**.

L8 ANSWER 10 OF 13 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AU Kotsopoulou E; Kim V N; Kingsman A J; Kingsman S M (Reprint); Mitrophanous K A
TI A Rev-independent human immunodeficiency virus type 1 (HIV-1)-based **vector** that exploits a codon-optimized HIV-1 gag-pol gene
SO JOURNAL OF VIROLOGY, (MAY 2000) Vol. 74, No. 10, pp. 4839-4852. Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171. ISSN: 0022-538X.
AB The human immunodeficiency virus (HIV) genome is AU rich, and this imparts a codon bias that is quite different from the one used by human genes. The codon usage is particularly marked for the gag, pol, and env genes. Interestingly, the expression of these genes is dependent on the presence of the Review-responsive element (RRE) regulatory system, even in contexts other than the **HIV** genome. The **Rev** dependency has been explained in part by the presence of RNA instability sequences residing in these coding regions. The requirement for Rev also places a limitation on the development of HIV-based **vectors**, because of the requirement to provide an accessory factor. We have now synthesized a complete codon-optimized HIV-1 gag-pol gene. We show that expression levels are high and that expression is Rev independent. This effect is due to an increase in the amount of gag-pol mRNA. Provision of the RRE in cis did not lower protein or RNA levels or stimulate a Rev response. Furthermore we have used this synthetic gag-pol gene to produce HIV **vectors** that now lack all of the accessory proteins. These **vectors** should now be safer than murine leukemia virus-based **vectors**.

L8 ANSWER 11 OF 13 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AU HelgaMaria C; Hammarskjold M L; Rekosh D (Reprint)
TI An intact TAR element and cytoplasmic localization are necessary for efficient packaging of human immunodeficiency virus type 1 genomic RNA
SO JOURNAL OF VIROLOGY, (MAY 1999) Vol. 73, No. 5, pp. 4127-4135. Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171. ISSN: 0022-538X.
AB Although most reports defining the human immunodeficiency virus type 1 (HIV-1) genomic RNA packaging signal have focused on the region downstream of the major 5' **splice site**, others have suggested that sequences upstream of the **splice site** may also play an important role, In this study we have directly examined the role played by the HIV-1 TAR region in RNA packaging. For these experiments we used a proviral expression system that is largely independent of Tat for transcriptional activation. This allowed us to create constructs that efficiently expressed RNAs carrying mutations in TAR and to determine the ability of these RNAs to be packaged, Our results indicate that loss of sequences in TAR significantly reduce the ability of a viral RNA to be packaged. The requirement for TAR sequences in RNA packaging was further examined by using a series of missense mutations positioned throughout the entire TAR structure. TAR mutations previously shown to influence Tat transactivation, such as G31U in the upper loop region or UCU to AAG in the bulge (nucleotides [nt] 22 to 24), failed to have any effect on RNA packaging. Mutations which disrupted the portion of the TAR stem immediately below the bulge also had little effect. In contrast, dramatic effects on RNA packaging were observed with constructs containing mutations in the lower portion of the TAR stem, Point mutations which altered nt 5 to 9, 10 to 15, 44 to 49, or 50 to 54 all reduced RNA packaging 11- to 25-fold. However, compensatory double mutations which restored the stem structure were able to restore packaging. These results indicate that an intact lower stem structure, rather than a specific sequence, is required for RNA packaging. Our results also showed that RNA molecules retained within the nucleus cannot be packaged, unless they are transported to the cytoplasm by either Rev/Rev response element or the

Mason-Pfizer monkey virus constitutive transport element.

L8 ANSWER 12 OF 13 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AU Huffman K M; Arrigo S J (Reprint)
TI Identification of cis-acting repressor activity within human immunodeficiency virus type 1 protease sequences
SO VIROLOGY, (4 AUG 1997) Vol. 234, No. 2, pp. 253-260.
Publisher: ACADEMIC PRESS INC JNL-COMP SUBSCRIPTIONS, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495.
ISSN: 0042-6822.
AB Human immunodeficiency virus type-1 (**HIV**-1) **Rev** overcomes negative elements within viral RNAs to allow expression of gag, pol, and env. The effect of Rev on protein and RNA expression of HIV-1 protease (PR)-containing constructs was investigated utilizing transient transfection of COS cells. Rev, through the Rev response element (RRE), resulted in a large increase in proteolytic activity and cytoplasmic RNA accumulation. Furthermore, Rev increased the level of total RNA produced by a PR-containing construct. The increase in cytoplasmic RNA accumulation in the presence of Rev indicated the presence of cis-acting repressor sequences (CRS) within the RNA produced by this construct, Therefore, components of the construct were analyzed for CRS activity. PR sequences in both sense and antisense orientations exhibited CRS activity. RRE sequences alone conferred a small CRS effect. Additional CRS activity was present within an unspliced RNA containing only nef and LTR sequences. These results indicate a novel form of cis-acting repressor activity within HIV-1 PR; this activity is exerted regardless of the orientation of PR and appears to function at the level of cytoplasmic or nuclear RNA stability. (C) 1997 Academic Press.

L8 ANSWER 13 OF 13 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AU Ernst R K; Bray M; Rekosh D; Hammarskjold M L (Reprint)
TI A structured retroviral RNA element that mediates nucleocytoplasmic export of intron-containing RNA
SO MOLECULAR AND CELLULAR BIOLOGY, (JAN 1997) Vol. 17, No. 1, pp. 135-144.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0270-7306.
AB A common feature of gene expression in all retroviruses is that unspliced, intron-containing RNA is exported to the cytoplasm despite the fact that cellular RNAs which contain introns are usually restricted to the nucleus. In complex retroviruses, the export of intron-containing RNA is mediated by specific viral regulatory proteins (e.g., human immunodeficiency virus type 1 [**HIV**-1] **Rev**) that bind to elements in the viral RNA. However, simpler retroviruses do not encode such regulatory proteins. Here,ve show that the genome of the simpler retrovirus Mason-Pfizer monkey virus (MPMV) contains an element that serves as an autonomous nuclear export signal for intron-containing RNA. This element is essential for MPMV replication; however, its function can be complemented by **HIV**-I **Rev** and the Rev-responsive element. The element can also facilitate the export of cellular intron-containing RNA. These results suggest that the MPMV element mimics cellular RNA transport signals and mediates RNA export through interaction with endogenous cellular factors.

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